

VZCZCXRO2984
PP RUEHAST RUEHCI RUEHLH RUEHNEH RUEHPW
DE RUEHBI #0559/01 3361346
ZNR UUUUU ZZH
P 011346Z DEC 08
FM AMCONSUL MUMBAI
TO RUEHC/SECSTATE WASHDC PRIORITY 6773
INFO RUCNCLS/ALL SOUTH AND CENTRAL ASIA COLLECTIVE
RUEHBI/AMCONSUL MUMBAI PRIORITY 1937
RUEHNE/AMEMBASSY NEW DELHI PRIORITY 8013
RUEHCI/AMCONSUL KOLKATA PRIORITY 1750
RUEHCG/AMCONSUL CHENNAI PRIORITY 1955
RUCPDO/DEPT OF COMMERCE WASHINGTON DC
RHMFIUU/DEPT OF ENERGY WASHINGTON DC
RUEATRS/DEPT OF TREASURY WASHINGTON DC
RUEHUNV/USMISSION UNVIE VIENNA PRIORITY 0028
RHEHAAA/NSC WASHINGTON DC
RUEAIIA/CIA WASHDC

UNCLAS SECTION 01 OF 05 MUMBAI 000559

SENSITIVE
SIPDIS

USDOE FOR SHANE JOHNSON, TOM CUTLER, AND COURTNEY GILLESPIE
STATE FOR EEB/ESC/IEC DAVID HENRY
NSC FOR ANISH GOEL
UNVIE FOR GEOFF PYATT

E.O. 12958: N/A
TAGS: [ENRG](#) [TRGY](#) [BEXP](#) [EINV](#) [EFIN](#) [ECON](#) [IN](#) [PREL](#)
SUBJECT: INDIAN NUCLEAR ENERGY SUPPLIERS ARE EAGER TO GLOBALIZE, BUT
CHALLENGES LIE AHEAD

REF: A. 07 MUMBAI 0706
[1](#)B. MUMBAI 494
[1](#)C. NEW DELHI 2985

MUMBAI 00000559 001.2 OF 005

[1](#)1. (SBU) Summary: In series of recent meetings in Mumbai, including with the delegation led by U.S. Nuclear Regulatory Commission Chairman Dale Klein, Indian private-sector nuclear energy equipment and service suppliers expressed enthusiasm about the opportunities awaiting them now that the U.S.-India Civil Nuclear Cooperation Initiative is largely completed. For decades, these companies have done the lion's share of work for India's indigenous reactors, but are now looking at ambitious plans to partner with foreign companies in India and overseas to take advantage of the global "nuclear renaissance." Government officials and industry players have privately cautioned that fully implementing liability protection could take several years and proceed in a step by step process, rather than a one-time enactment of the Convention on Supplementary Compensation (CSC). Nevertheless, all admit that several challenges still remain -- from passage of nuclear liability legislation to opening up nuclear power generation to the private sector -- before India's nuclear power production goals can be met. End Summary.

Indian Private Sector Companies Look to Play Major Role in
Indian Nuclear Power Development

[1](#)2. (SBU) In a recent meeting, Anil Ambani, the Chairman of the Reliance Anil Dhirubhai Ambani Group (ADAG), told the Consul General that he is looking to enter the nuclear power generation business in India as soon as it is privatized. Ambani said that Reliance ADAG has already finished discussions with equipment suppliers in Russia, France, and South Africa - but not the U.S. (Note: Reliance Power Limited is developing 13 medium and large-sized coal, gas and hydroelectric power projects with a combined planned installed capacity of 28,200 MW, one of the

largest portfolios of power generation assets under development in India. End Note.) Ambani believes that the Nuclear Power Corporation of India, Ltd. (NPCIL) cannot expand India's nuclear power sector on its own, and private sector participation is necessary. However, he said that the Department of Atomic Energy (DAE) under the leadership of Dr. Anil Kadhokar would fight the entry of private players at all costs. Despite the uncertainty of private sector participation, Reliance ADAG has hired a former NPCIL Chairman, Dr. V.K. Chaturvedi to head its nuclear operations at Reliance Energy, and has arranged for 100 engineers to be trained by NPCIL. (See New Delhi xxxx for a report of Dr. Kadhokar's views on the privatization of the Indian nuclear sector.)

13. (SBU) In a separate discussion, Anil Parab, the General Manager of the nuclear business of Larsen & Toubro (L&T), a leading player in infrastructure development, construction and heavy engineering sector, opined that privatization of the Indian nuclear energy sector is at least a decade away. He explained that the Confederation of Indian Industry (CII) was trying to push privatization of the sector, as many of its members are private sector power generation companies, while the other leading chamber of commerce, the Federation of the Indian Chambers of Commerce & Industry (FICCI), was pushing to maintain the status quo as existing players in the nuclear energy industry -- including NPCIL -- are amongst its members. V.K. Sharma, a former Technical Director of NPCIL who now works for Gammon India, a major construction and project management firm, pointed out that NPCIL is little more than a general contractor, and outsources all construction work to private industry. He could not foresee complete privatization, but believes that the government will eventually amend the law to allow the private sector to partner with NPCIL. NPCIL, alone, will not be able to manage the large number of reactor facilities that are being

MUMBAI 00000559 002.2 OF 005

planned, he argued. Nevertheless, interlocutors agreed private companies would not be willing to invest in nuclear energy until the nuclear liability law is passed. Equity caps for private players is another issue; if the government-owned partner retains 51 percent stake, the company has to abide by government norms, Parab noted.

Nuclear Liability Law Some Ways Off

14. (SBU) According to Ambani, in order for India's nuclear power sector to grow as anticipated, the Parliament must amend current atomic energy legislation to allow for private sector participation, as well as pass nuclear liability legislation, he said. Ambani said that the nuclear liability law is especially important for U.S. companies, which would find the Indian market too risky and be unlikely to participate in the sector without such a law in place, unlike Russian or French companies which have the backing of their governments. (Note: Existing legislation permits Indian government-owned companies to operate nuclear power plants provided they are approved by the Department of Atomic Energy (DAE). The government-owned National Thermal Power Corporation, the largest power generation company in India, may get DAE's "blessing" to partner with the sole nuclear power operator, the Nuclear Power Corporation of India Limited (NPCIL) for nuclear power generation. NPCIL does not require nuclear liability legislation, as it has the "implicit" backing of the government in case of a nuclear accident. End Note.)

¶5. (SBU) Ambani noted that a new Indian Parliament won't meet until September 2009 after the next national elections, so the window to amend the nuclear energy acts - and pass nuclear liability legislation -- is short and closing. In fact, he added, the liability law "is not even on the cards." However, Ambani expressed his belief that the U.S. "should not be left behind" once nuclear commerce begins, as the U.S. did all the hard work to make the Civil Nuclear Initiative possible. Ambani explained that the "view among knowledgeable people in New Delhi" is that the U.S. companies -- GE and Westinghouse, among others -- would rather sell equipment and parts than design, build and operate plants in India, implying that nuclear liability legislation should not be a priority.

¶6. (SBU) In contrast, L&T's Parab speculated that the Indian Parliament would pass its own nuclear liability law in January ¶2009. The law was to be passed during the fall session of the Parliament but most of the Parliamentarians had left to campaign for state elections and so it was deferred to January, he explained. However, Parab privately confided that he fears that the domestic nuclear liability law would not be consistent with the Convention on Supplementary Compensation for Nuclear Damage (CSC) and it may take another two years to reconcile the legislation with the international treaty. (Note: In a separate conversation with Gitesh Sharma, the Ministry of External Affairs' representative at DAE, he told the Consul General that the domestic nuclear liability law was a "first step" towards CSC compatibility, but was largely "in line with" the CSC. End Note.)

¶7. (SBU) Parab also believes that the nuclear energy safety regulator in India, the Atomic Energy Regulatory Board (AERB), should be completely independent from the DAE to ensure

MUMBAI 00000559 003.2 OF 005

transparency and fairness. Currently, the AERB reports to the Atomic Energy Commission whose chairman, Kakodkar, is the Secretary of the DAE. In addition, he noted that the Indian Mergers and Acquisition laws will need to be amended, so that nuclear liabilities can be transferred from one company to another in the event of a buy-out. Besides the nuclear liability law, Gammon India's Sharma pointed out issues pertaining to spent fuel and the management and safeguarding of imported nuclear energy technology have still to be sorted out.

Financing, Local Sourcing and Price to Determine Choice of Foreign Vendor

¶8. (SBU) NPCIL currently operates 17 nuclear power plants and is constructing an additional six nuclear energy facilities. NPCIL plans to construct an additional eight pressurized heavy water reactors (PHWRs), with a capacity of 700 MW each indigenously, and plans to import 24 light water reactors (LWRs). Parab noted that NPCIL had enough funds to finance eight additional PHWRs of 700 MW each. The company would have to secure external financing for buying imported LWRs. NPCIL should be easily able to secure domestic and foreign financing as it is triple-A rated, he said. NPCIL will be able to secure financing at market rates rather than replicate the subsidized credit financing model of the Russian reactors, he opined.

¶8. (SBU) Nilendra Nigam, the Executive Vice President of L&T, pointed out that the cost of imported LWRs is significantly

higher than indigenous PHWRs. Foreign vendors should therefore source a major portion of the nuclear equipment locally to bring down costs, he said. Parab believes that pricing will be a decisive factor in the selection of imported reactor technology once the initial reactor technology contracts are "politically" determined and awarded to both General Electric and Westinghouse of the U.S., as well as Russia and France. Gammon India's Sharma agreed that imported reactors have to be priced competitively and suggested foreign vendors tie-up with Indian nuclear energy equipment suppliers to discuss local sourcing to bring down costs. Except for the reactor pressure vessel, all other equipment can be sourced from India, he continued. S.K. Jain, the Chairman & Managing Director of NPCIL, had earlier emphasized during a December 2007 discussion with the USIBC's nuclear energy vendors delegation that foreign vendors will be encouraged or required to source reactor components and nuclear energy equipment locally (see ref A). Parab told Congenoff that L&T will sign a MOU with Westinghouse for this purpose during the week of November 24.

Indian Companies Seek to Globalize

¶9. (SBU) Besides India's NPCIL, Indian companies will also be able to sell nuclear equipment and components to utilities in the U.S., which was not an option before the 123 agreement. During meetings with the Indian private sector nuclear equipment suppliers during the week of November 17, the Chairman of the U.S. Nuclear Regulatory Commission (NRC), Dale Klein, noted that U.S. industry is unlikely to engage in heavy manufacturing and would prefer to source nuclear energy equipment from abroad and assemble it in the U.S. Modular construction is preferable to on-site work at the reactor site as it is more timely, of better quality, and reduces the manpower strength at the site, he added. Klein told Indian interlocutors that the NRC has

MUMBAI 00000559 004.2 OF 005

received applications for 26 new reactors in the U.S., and several utilities are also looking at getting lifetime extensions for existing reactors, providing many commercial opportunities for the sale of nuclear energy equipment and components in the U.S. The French market may be more difficult to penetrate as the major nuclear reactor vendor and utility company in France, Areva and EDF, are government-owned, he said. L&T's Parab agreed and noted Areva's investment of USD 42 million to purchase 1.3 percent stake in Japan Steel Works, the only supplier of forgings for nuclear power plants, to secure forgings for its reactors.

L&T Forges Overseas to Expand Domestic Nuclear Energy Footprint

¶10. (SBU) L&T manufactures reactor vessels for PHWRs and fast breeder reactors (FBRs) for the Indian nuclear energy program and critical equipment and systems for heavy water plants, fuel re-processing plants and plasma reactors. The company is also engaged in the civil construction and life extension services for existing nuclear energy reactors through on-site inspection and replacement of coolant channels. According to L&T's Nigam, the company has a "footprint" in all nuclear energy facilities in India with the exception of the first two boiling water reactors, which were built by GE. For example, he noted that L&T had done over two-thirds of the work on the FBR at Kalpakkam in Tamil Nadu. L&T is also involved in the civil works, piping and supply of condensers and other auxiliary equipment for India's first imported light water reactor (LWR) based on

Russian technology in Kundakulam in Tamil Nadu.

¶11. (SBU) L&T Chairman and Management Director A.M. Naik told Chairman Klein that L&T has formed a 76:24 joint venture (JV) with the NPCIL to manufacture forgings for nuclear power plants. According to Naik, there is a global shortage of forgings, as Japan Steel Works is the only supplier of forgings for nuclear power plants and increased demand for these forgings has created a backlog. L&T's forgings plant will be located at the coastal site of Hazira in Gujarat alongside the company's existing manufacturing facilities for reactors and steam generators. Naik emphasized that by taking a minority stake in this venture, NPCIL indicated its commitment to buy forgings from L&T. Another JV to manufacture nuclear tubing may be next, he said. The purpose behind such arrangements is to complete the nuclear energy supply chain. Naik pointed out that only 30 percent of the company's manufacturing capacity at Hazira will be utilized to build nuclear equipment for the Indian nuclear energy program. The company will use the remaining capacity at Hazira to manufacture supercritical boilers for the power industry and other heavy equipment for refineries and petrochemical plants. In this way, Naik explained, L&T has "hedged" against the risk that no nuclear power plant will be built in India in the next five years. The company has invested USD 1 billion to expand its existing facilities at Hazira.

¶12. (SBU) Naik also explained that L&T and the DAE are engaged in discussions on constructing and exporting small nuclear reactors. The price of a steam generator in India costs half that of a similar generator in Canada for example, he said. The Shaw group in the U.S., Westinghouse, NPCIL and L&T are also examining the feasibility of a "single window" facility to build a complete turnkey nuclear energy plant, he continued. Nigam emphasized that L&T plans to remain "technology-neutral" and will supply nuclear energy equipment to all companies requiring their services, both in India and overseas.

MUMBAI 00000559 005.2 OF 005

~While Other Indian Suppliers Focus on India

¶13. (SBU) Tata Consulting Engineering (TCE) acts as the design consulting engineer for all NPCIL nuclear power plants, excepting the first two BWRs facilities. The company provides project management and engineering services for fuel fabrication, power generation, and management and disposal of disposal of nuclear waste. R. Srinivasan, the Deputy Managing Director of TCE, is enthusiastic about the opportunities to support U.S. reactor vendors in India. The company is in discussions with GE, Westinghouse and Areva to offer support for design consulting engineering, he added. TCE also prepares design reports for safety-related structures and components, reviews contractor's contributions in safety documents, and prepares documentation for nuclear project safety review, which NPCIL then submits to the AERB. TCE's familiarization with AERB procedures and guidelines will be an asset to U.S. companies looking for AERB approval for licensing their technology. Gammon India's nuclear power team told Congenoff that they hope to obtain civil engineering contracts, and are looking to partner with U.S. firms, such as Bechtel.

¶14. (SBU) Comment: In building nuclear power plants, NPCIL sub-contracts most of the construction, forgings, and the manufacturing of sensitive parts and materials out to Indian private sector companies. In this sense, there is already considerable private sector participation. NPCIL has told

ConGenoffs on several occasions that once India is permitted to engage in nuclear commerce, it plans to serve as an apex contracting body under whose oversight all new nuclear plants will be developed and operated. However, it is clear that Indian companies are seeking a much bigger role, hoping to serve as operators and global suppliers in a wider nuclear power universe. Private players feel confident that ultimately, they will be able to play a bigger role in building and operating nuclear power plants. Nevertheless, it is important to remember that there are many new entrants into the non-nuclear power production business - including Reliance ADAG - with little track record, which understandably makes NPCIL and nuclear energy regulators reluctant to open up the market to untested players.

¶15. (SBU) Press reports indicate that the French company Areva has already been assigned a site to develop nuclear power plants at Jaitapur in Maharashtra; sites elsewhere in India -- in West Bengal, Andhra Pradesh, and Gujarat -- are reportedly yet to be assigned. If the India government's view is that U.S. companies seek only to be equipment suppliers, it may not prioritize a nuclear liability law, which would be a prerequisite for the operation of nuclear power facilities and equipment sales by U.S. companies. In any case, the U.S. participation in India's nuclear sector will likely be mediated through the already cozy relationship established between NPCIL and its sub-contractors.
End Comment.
FOLMSBEE